

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA ENGINEERING – SEMESTER – IV • EXAMINATION – SUMMER- 2017

Subject Code: 3342302**Date: 01- 05- 2017****Subject Name: Design for Injection Mould****Time: 10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of programmable & Communication aids are strictly prohibited.
5. Use of only simple calculator is permitted in Mathematics.
6. English version is authentic.

- Q.1** Answer any seven out of ten. **14**
1. Define shrinkage allowance.
 2. What do you mean by venting in injection mould design?
 3. What is reverse-tapered secondary sprue used in three plate mould?
 4. What is under-feed mould?
 5. Write function of opening control devices used in three plate mould.
 6. Draw simple free hand sketch of stripper plate mould in closed condition.
 7. Define 'double daylight mould'.
 8. Define 'split' and write function of it.
 9. Define 'finger cam' and write function of it.
 10. List various types of moulds used for internally or externally threaded components.
- Q.2** (a) Describe the selection requirement for injection mould material. **07**
- OR
- (a) List the types of mould materials used for injection mould and write on any one in detail. **07**
- (b) Explain tapered location recess in core or cavity used along with guide pillars for better alignment. **07**
- OR
- (b) Explain working of any one type of mould used for internally threaded components with relevant sketch. **07**
- Q.3** (a) Write in brief about the type of undercut in product for which split mould design is required. **03**
- OR
- (a) Explain any one type of sliding split design with neat sketch. **03**
- (b) Write mould designer's check list. **07**
- OR
- (b) Explain working of any one type of mould used for externally threaded components with relevant sketch. **07**
- (c) Write brief note on 'splits locking method'. **04**

OR

- (c) Explain any one type of splits safety arrangement with neat sketch. **04**
- Q.4** (a) List various components of two-plate injection mould with their function. **07**
- OR
- (a) Explain any one runner ejection technique required for three-plate mould when using reverse-tapered secondary sprue with neat sketch. **07**
- (b) Differentiate the two-plate and three-plate injection mould. Also draw simple sketches of these moulds. **07**
- Q.5** (a) Explain any one step of mould assembling procedure (Bench fitting) with neat sketch. **04**
- (b) Sketch any two products which necessitates split mould design (also indicate joint line on them). **04**
- (c) Write any three advantages and any three disadvantages of hot runner mould. **03**
- (d) Draw neat sketch of any one type of opening control device used in three plate mould. **03**
